NOHARA et al.

Serial No. 10/659,425

Response to Office Action dated October 17, 2006

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

Claim1 (Canceled).

Claim 2 (Original): A modulating apparatus for optical communication which modulates a carrier by a modulation signal and generates a modulated wave to be supplied to a light emitting diode, wherein modulation is executed to satisfy:

fd>f1,

fu<f2, and

 $fc>3(1+\alpha) fsr/2$ 

when a lower limit frequency of a use-permitted frequency band is f1 [Hz], an upper limit frequency of the use-permitted frequency band is f2 [Hz], a carrier frequency is fc [Hz], a rolloff factor is α, and a symbol rate of the modulation signal is fsr.

Claims 3 and 4 (Canceled).

Claim 5 (Original): A transmitting apparatus comprising:

a modulating apparatus for optical communication which modulates a carrier by a modulation signal and generates a modulated wave to be supplied to a light emitting device, wherein modulation is executed to satisfy:

fd>f1,

fu<f2, and

 $fc>3(1+\alpha) fsr/2$ 

when a lower limit frequency of a use-permitted frequency band is f1 [Hz], an upper limit frequency of the use-permitted frequency band is f2 [Hz], a carrier frequency is fc [Hz], a rolloff factor is .alpha., and a symbol rate of the modulation signal is fsr; and

a light transmitting unit having the light emitting device which is driven by the modulated

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wave generated by the modulating apparatus and outputs a light-modulated wave.

Claim 6 (Canceled).

Claim 7 (Original): A computer program embodied on a computer-readable medium product for making a computer function as a modulating apparatus, by executing the computer program, for optical communication which modulates a carrier by a modulation signal and generates a modulated wave to be supplied to a light emitting device, wherein modulation is executed to satisfy:

fd>f1,

fu<f2, and

 $fc>3(1+\alpha) fsr/2$ 

when a lower limit frequency of a use-permitted frequency band is f1 [Hz], an upper limit frequency of the use-permitted frequency band is f2 [Hz], a carrier frequency is fc [Hz], a rolloff factor is .alpha., and a symbol rate of the modulated signal is fsr.